

POST-DOCTORAL POSITION

Structural and functional impact of copper ions on the regulation of the molecular chaperone Hsp33 which undergoes disorder-to-order transition upon redox switches

We are seeking a highly-motivated post-doctoral structural biologist to join our group at the BIP laboratory, Marseille (<https://bip.cnrs.fr/>). The overarching aim of the research project is to understand the bactericidal effect of copper on the aggregation of proteins. The project of the candidate will focus on the *Escherichia coli* chaperone Hsp33, a holdase that prevents protein aggregation, and which undergoes complex disorder-to-order transitions upon activation by copper ions and by redox switches. A structural study in the absence and in the presence of clients will be conducted using mainly NMR spectroscopy in combination with SAXS, DLS, circular dichroism (CD) and molecular modelling to decipher the impact of Cu^I and Cu^{II} on the regulation of Hsp33 at the molecular level. The institute has all the required facilities for structural biology with a 600MHz NMR spectrometer equipped with a cryoprobe, easy access to the National NMR high field spectrometers platforms, CD and DLS instruments, regular access to synchrotron, etc. The research project will be carried out in Marseille, in the BIP02 group, headed by Brigitte Gontero-Meunier and Helene Launay, under the supervision of Véronique Receveur-Bréchet and Hélène Launay, experts in the study of redox intrinsically disordered proteins. This study will be conducted in close collaboration with Marianne Ilbert from the BIP01 group, and is part of an interdisciplinary consortium made of chemists, biophysicists, biochemists and molecular biologists. This position will therefore provide opportunities for multidisciplinary collaborations and for visiting large instruments and cutting-edge facilities (synchrotron, high field NMR platforms...).

Candidates must hold a PhD and should have an experience in NMR spectroscopy of proteins and in protein biochemistry including protein expression and purification. Experience on intrinsically disordered proteins is a plus but is not mandatory. The candidates will have a demonstrated ability to work independently, with strong oral and written communication skills, and ease in a multidisciplinary team.

The postdoctoral position is for 1 year 1/2 (18 months) starting 1st January 2022, and is funded by ANR. The salaries will be based on the CNRS salary scheme depending on the experience of the candidate.

Application should include a CV, list of publications, motivation letter including a description of your research interests, and the names and contact details of at least two referees.

Contact :

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